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29. A method of assembling a motor shaft with a motor component, the method comprising the steps of:

providing a motor shaft having a first surface geometry comprising a non-circular cross section;

providing a shaft extension having a first end having a second surface geometry comprising a non-circular cross section adapted to mate with the first surface geometry of the motor shaft;

interengaging the first surface geometry of the motor shaft with the second surface geometry of the shaft extension so that the shaft extension rotates with the motor shaft; and

installing a second end of the shaft extension into a lower assembly.

30. The method of claim 29, wherein the first surface geometry comprises a hexagonal cross section.

31. The method of claim 29, wherein the first surface geometry comprises a square cross section.

32. The method of claim 29, wherein the first surface geometry defines a compartment within the motor shaft.

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33. The method of claim 29, further comprising a step of tightening a retainer onto the motor shaft.

34. The method of claim 33, wherein said retainer comprises a hexagonal threaded nut.

35. The method of claim 29, wherein the lower assembly comprise a pump impeller.

36. The method of claim 29, wherein the lower assembly comprises a bearing.

37. The method of claim 36, wherein the bearing comprises a powdered metal bearing.
38. The method of claim 36, wherein the bearing comprises a roller ball bearing.
39. A motor assembly, comprising:
a motor shaft having a first surface geometry comprising a non-circular cross section;
a shaft extension having a first and second ends, wherein the first end of the shaft extension has a second surface geometry comprising a non-circular cross section, wherein the second surface geometry of the shaft extension is mated with the first surface geometry of the motor shaft so that the shaft extension rotates with the motor shaft; and
a lower assembly into which a second end of the shaft extension into a lower assembly.
40. The motor assembly of claim 39, wherein the first surface geometry comprises a hexagonal cross section.
41. The motor assembly of claim 39, wherein the first surface geometry comprises a square cross section.
42. The motor assembly of claim 39, wherein the first surface geometry defines a compartment within the motor shaft.
43. The motor assembly of claim 39, further comprising a retainer tightened onto the motor shaft.
44. The motor assembly of claim 43, wherein said retainer comprises a hexagonal threaded nut.

45. The motor assembly of claim 39, wherein the lower assembly comprise a pump impeller.

46. The motor assembly of claim 39, wherein the lower assembly comprises a bearing.

47. The motor assembly of claim 46, wherein the bearing comprises a powdered metal bearing.

48. The method of claim 46, wherein the bearing comprises a roller ball bearing.

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